



In the Application of:
Meinke et al.

Serial No.: 10/552.156

Filing Date: October 11, 2005

Title: Streptococcus Pyogenes Antigens

Examiner: Baskar

Confirmation No.: 4561

Group Art Unit: 1645

Commissioner for Patents
P.O. Box 1450
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Sir:

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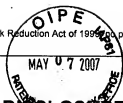
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Respectfully submitted,
McDonnell Boehnen Hulbert & Berghoff

Dated: May 1, 2007

By:

Kevin E. Noonan, Ph.D.
Reg. No. 35,303



**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		10552156
Filing Date		2005-10-11
First Named Inventor	Meinke	
Art Unit	1645	
Examiner Name	Baskar, Padmavathi	
Attorney Docket Number	05-747	

U.S. PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
/PB/	1	5744309			Patent Withdrawn	
/PB/	2	4946778		1990-08-07	Genex Corp	
/PB/	3	5849902		1998-12-15	Oligos Etc. Inc.	
/PB/	4	5989912		1999-11-23	Oligos Etc. Inc.	

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/PB/	1	WO 02/059148	WO		2002-08-01	Cistem Biotechnologies GmbH		<input type="checkbox"/>
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/PB/	7	97/30721	WO		2007-03-19	Boehringer Ingelheim International GmbH		<input type="checkbox"/>
/PB/	8	99/38528	WO		1999-08-05	Boehringer Ingelheim GmbH		<input type="checkbox"/>
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/PB/	11	01/93905	WO		2001-12-13	Cistem Biotechnologies GmbH		<input type="checkbox"/>

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/PB/	12	01/54720	WO		2001-02-02	Cistem Biotechnologies GmbH		<input type="checkbox"/>
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
/PB/	1	Adamou, J., et al. (2001). "Identification and Characterization of a Novel Family of Pneumococcal Proteins That Are Protective against Sepsis" Infect Immun 69: 949-58	<input type="checkbox"/>
/PB/	2	Altschul, S., et al. (1990). "Basic Local Alignment Search Tool" Journal of Molecular Biology 215: 403-10	<input type="checkbox"/>
/PB/	3	Bennett, D., et al. (1995). J Mol Recognit 8: 52-8	<input type="checkbox"/>
/PB/	4	Brown, J., et al. (2001). "Immunization with Components of Two Iron Uptake ABC Transporters Protects Mice against Systemic Streptococcus pneumoniae Infection" Infect Immun 69: 6702-6	<input type="checkbox"/>

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/PB/	5	Burnie, J., et al. (1998). "The renaissance of antibody therapy" J Antimicrob Chemother 41: 319-22	<input type="checkbox"/>
/PB/	6	Clackson, T., et al. (1991). Nature 352: 624-8	<input type="checkbox"/>
/PB/	7	Devereux, J., et al. (1984). "A comprehensive set of sequence analysis programs for the VAX" Nucleic acids research 12: 387-95	<input type="checkbox"/>
/PB/	8	Di Guilmi, A., et al. (2002). "New approaches towards the identification of antibiotic and vaccine targets in Streptococcus pneumoniae" EMBO Reports 3: 728-34	<input type="checkbox"/>
/PB/	9	Doherty, E., et al. (2001). Annu Rev Biophys Biomol Struct 30: 457-475	<input type="checkbox"/>
/PB/	10	Eisenbraun, M., et al. (1993). DNA Cell Biol 12: 791-7	<input type="checkbox"/>
/PB/	11	Wizemann, T., et al. (2001). "Use of a Whole Genome Approach To Identify Vaccine Molecules Affording Protection against Streptococcus pneumoniae Infection" Infect Immun 69: 1593-8	<input type="checkbox"/>
/PB/	12	Etz, H., et al. (2001). "Bacterial Phage Receptors, Versatile Tools for Display of Polypeptides on the Cell Surface" J Bacteriol 183: 6924-35	<input type="checkbox"/>
/PB/	13	Ganz, T. (1999). "Defensins and Host Defense." Science 286: 420-421	<input type="checkbox"/>
/PB/	14	Georgiui, G. (1997). "Display of heterologous proteins on the surface of microorganisms: From the screening of combinatorial libraries to live recombinant vaccines" Nature Biotechnology 15: 29-34	<input type="checkbox"/>
/PB/	15	Gray, B., et al. (1979). J Infect Dis 140: 979-83	<input type="checkbox"/>

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/PB/	16	Gray, B., et al. (1986). <i>Pediatr Infect Dis</i> 5: 201-7	<input type="checkbox"/>
/PB/	17	Hashemzadeh-Bonehi, L., et al. (1998). <i>Mol Microbiol</i> 30: 676-678	<input type="checkbox"/>
/PB/	18	Hausdorff, W., et al. (2001). "Geographical differences in invasive pneumococcal disease rates and serotype frequency in young children" <i>Lancet</i> 357: 950-2	<input type="checkbox"/>
/PB/	19	Tettelin, H., et al. (2001). <i>Science</i> 293: 498-506.	<input type="checkbox"/>
/PB/	20	Hemmer, B., et al. (1999). "Identification of candidate T-cell epitopes and molecular mimics in chronic Lyme disease" <i>Nat Med</i> 5: 1375-82	<input type="checkbox"/>
/PB/	21	Hoe, N., et al. (2001). "Distribution of Streptococcal Inhibitor of Complement Variants in Pharyngitis and Invasive Isolates in an Epidemic of Serotype M1 Group A Streptococcus Infection" <i>J Infect Dis</i> 183: 633-9	<input type="checkbox"/>
/PB/	22	Hornef, M., et al. (2002). "Bacterial strategies for overcoming host innate and adaptive immune responses" <i>Nat Immunol</i> 3: 1033-40	<input type="checkbox"/>
/PB/	23	Hoskins, J., et al. (2001). "Genome of the Bacterium Streptococcus pneumoniae Strain R6" <i>J Bacteriol</i> 183: 5709-17	<input type="checkbox"/>
/PB/	24	Hyde, T., et al. (2001). "Macrolide Resistance Among Invasive Streptococcus pneumoniae Isolates" <i>JAMA</i> 286: 1857-62	<input type="checkbox"/>
/PB/	25	Jedrzejewski, M. (2001). <i>Microbiol Mol Biol Rev</i> 65: 187-207	<input type="checkbox"/>
/PB/	26	Johanson, K., et al. (1995). "Binding Interactions of Human Interleukin 5 with Its Receptor Subunit" <i>J Biol Chem</i> 270: 9459-71	<input type="checkbox"/>

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/PB/	27	Jones, P., et al. (1986). "Replacing the complementarity-determining regions in a human antibody with those from a mouse" Nature 321: 522-5	<input type="checkbox"/>
/PB/	28	Kajava, A., et al. (2000). "The Net Charge of the First 18 Residues of the Mature Sequence Affects Protein Translocation across the Cytoplasmic Membrane of Gram-Negative Bacteria" J Bacteriol 182: 2163-9	<input type="checkbox"/>
/PB/	29	Kohler, G., et al. (1975). "Continuous cultures of fused cells secreting antibody of predefined specificity " Nature 256: 495-7	<input type="checkbox"/>
/PB/	30	Kolaskar, A., et al. (1990). "A semi-empirical method for prediction of antigenic determinants on protein antigens" FEBS Lett 276: 172-4	<input type="checkbox"/>
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/PB/	32	Marks, J., et al. (1992). Biotechnology (N Y) 10: 779-83	<input type="checkbox"/>
/PB/	33	McCafferty, J., et al. (1990). Nature 348: 552-4	<input type="checkbox"/>
/PB/	34	McCormick, A., et al. (2003). "Geographic diversity and temporal trends of antimicrobial resistance in Streptococcus pneumoniae in the United States" Nat Med 9: 424-30	<input type="checkbox"/>
/PB/	35	McDaniel, L., et al. (1991). "PspA, a surface protein of Streptococcus pneumoniae, is capable of eliciting protection against pneumococci of more than one capsular type" Infect Immun 59: 222-8	<input type="checkbox"/>
/PB/	36	Navarre, W., et al. (1999). Microbiol Mol Biol Rev 63: 174-229	<input type="checkbox"/>
/PB/	37	Okano, H., et al. (1991). J Neurochem 56: 560-7	<input type="checkbox"/>

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/PB/	38	Tourdou, S., et al. (2000). "A general strategy to enhance immunogenicity of low-affinity HLA-A2.1-associated peptides: implication in the identification of cryptic tumor epitopes" Eur J Immunol 30: 3411-21.	<input type="checkbox"/>
/PB/	39	Orange, M., et al. (1993). Pediatr Infect Dis J 12: 244-6	<input type="checkbox"/>
/PB/	40	Pelton, S., et al. (2003). "Pneumococcal conjugate vaccines: proceedings from an Interactive Symposium at the 41st Interscience Conference on Antimicrobial Agents and Chemotherapy" Vaccine 21: 1562-71	<input type="checkbox"/>
/PB/	41	Phillips-Quagliata, J., et al. (2000). "The IgA/IgM Receptor Expressed on a Murine B Cell Lymphoma Is Poly-Ig Receptor" J Immunol 165: 2544-55	<input type="checkbox"/>
/PB/	42	Rammensee, H., et al. (1999). "SYFPEITHI: database for MHC ligands and peptide motifs" Immunogenetics 50: 213-9	<input type="checkbox"/>
/PB/	43	Roche, H., et al. (2003). "Regions of PspA/EF3296 Best Able To Elicit Protection against Streptococcus pneumoniae in a Murine Infection Model" Infect Immun 71: 1033-41	<input type="checkbox"/>
/PB/	44	Romero-Steiner, S., et al. (1999). "Reduction in Functional Antibody Activity Against Streptococcus pneumoniae in Vaccinated Elderly Individuals Highly Correlates with Decreased IgG Antibody Avidity" Clin Infect Dis 29: 281-8	<input type="checkbox"/>
/PB/	45	Rosenow, C., et al. (1997). "Contribution of novel choline-binding proteins to adherence, colonization and immunogenicity of Streptococcus pneumoniae" Mol Microbiol 25: 819-29	<input type="checkbox"/>
/PB/	46	Seeger, C., et al. (1984). "The Cloned Genome of Ground Squirrel Hepatitis Virus is Infectious in the Animal" Proc Natl Acad Sci U S A 81: 5849-52	<input type="checkbox"/>
/PB/	47	Shibuya, A., et al. (2000). "Fc receptor mediates endocytosis of IgM-coated microbes" Nature Immunology 1: 441-6	<input type="checkbox"/>
/PB/	48	Sekra, A. et al. (1994). "Use of the tetracycline promoter for the tightly regulated production of a murine antibody fragment in Escherichia coli" 151: 131-5	<input type="checkbox"/>

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/PB/	49	Talkington, D. et al (1996) Microb Pathog 21: 17-22	<input type="checkbox"/>
/PB/	50	Tang, D., et al. (1992). Nature 356: 152-4.	<input type="checkbox"/>

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Examiner Signature	/Padmavathi Baskar/	Date Considered	02/19/2008
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- ☐ See attached certification statement.
- ☐ Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.
- ☐ None

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